Atoms for Peace

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国际原子能机构
International Atomic Energy Agency
Agence Internationale de l'énergie atomique
Международное агентство по атомной энергии
Organismo Internacional de Energía Atómica

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Ms. Barbara Hoffheins

ISPO Liaison Officer
U.S. Mission to the International Organizations in Vienna (UNVIE)
Wagramer Strasse 17-19
A-1220 Vienna
Austria

2009-08-31

Dear Ms. Hoffheins,

With reference to the US Support Programme, I am pleased to provide the attached new cost-free expert task proposal with a copy of the relevant job description for your consideration.

The Department of Safeguards would appreciate the nomination of more than one candidate. This will allow the Department to perform an evaluation of candidates that will result in the most suitable candidate being selected for the task. So that this process may proceed on a timely basis, I have listed the proposal below along with a closing date for nominations and expected start date. Also in order to facilitate the selection process, I would like to ask you to send the candidates' Curricula Vitae and an Agency Personal History Form with the nomination. Of course all information will be treated as confidential.

SP-1 Number	Title	Expected Start Date	Closing Date f. Nominations
08/IAP-003	Expert – Seals and Containment Information Management System	As soon as possible	As soon as possible

I will inform you of the result of the evaluation as soon as a decision is made. The final documentation for the successful candidate can then be completed through the Support Programmes Coordination and the Division of Human Resources.

I would also like to take this opportunity to express the appreciation of the Agency for the valuable contribution provided by your Support Programme to the safeguards efforts of the IAEA.

Yours sincerely,

Nikolai Khlebnikov
Director
Division of Technical Support
Department of Safeguards

Enclosure

SP-1
TASK PROPOSAL PART

1. Task Proposal

1.1 Task Proposal ID: 08/IAP-003 **Date received in SPA:** 2008-08-15

1.2 Task Title: Expert - Seals and Containment Information Management System

1.3 Requester / Division / Section: Sirajov / SGIM / IAP

1.4 Is this a CFE task? Yes

1.5 Task Category: D

1.6 Is this a joint task for MSSPs? No

1.7 Is multiple acceptance required? No

If 1.6 or 1.7 is yes, indicate the reason:

2. Project

2.1 Project ID: SGIM-001 **Project Type:**

2.2 Project Title: Integrated Safeguards Environment

2.3 Project Manager / Division / Section: Kirkgoeze / SGIM / IAP

3. Safeguards Requirement Identification

3.1 What is needed, why and when:

New IRP-compliant software needs to be developed to assist IAEA inspectors with improving the management of seals and containment related information. The analysis of the relevant business processes under the Verification Business Architecture project has been started, however, the amount of work to be done to complete the task requires additional resources.
Therefore, the assistance of a Cost Free Expert with Service Oriented Architecture (SOA)-specific software engineering skills and business analysis capabilities is necessary to take over this task and complete the business analysis process, refine all user requirements, and produce use cases. After that, solution architecture must be designed and then implemented. In addition to this, migration of seals data from mainframe database to the IRP data center will be needed.

3.2 How will the task results be used and by whom:

The system will be used by IAEA inspectors and support staff to manage seals and containment-related data. It will allow them to properly manage the life cycles of seals and containments by keeping track of their locations and status. It will properly interface with the various seals currently in use in order to maximize the utility provided by the specific characteristics of the various seal types. The system will eliminate the need for various working papers and their corresponding demand for clerical resources. It will thus standardize and centralize the processing of seals for all Operation Divisions, increase the consistency and availability of the resulting information, and reduce the paperwork required for seals management.

3.3 Consequences if task is not performed:

The landscape of seals management applications used by the Operations Divisions and other concerned parties in the IAEA is disparate and inconsistent. This landscape, consisting of the current mainframe application and seals file and other custom solutions developed by users and contractors does not meet the users' evolving business needs. Although the current seals solutions allow the users to fulfil some of their business needs, there is currently no solution that properly handles containment information, or seal type-specific data. Without uniform software, the users' effort to handle seals and containment data and in general to perform inspection-related activities effectively and efficiently will be degraded. In addition, the ongoing effort to migrate from the

current mainframe platform to the IRP compliant one and to integrate the disparate information systems within Safeguards will suffer.

4. IAEA Proposed Work Outline

4.1 Major task stages with timing:

1. Review and completion of the business process model for seals and containment activities Refinement of existing and identification of new information system services based on SOA approach. 2 months
2. Refinement and prioritization of all functional and non-functional requirements. Completion of use cases 2 months
3. Completion and refinement of logical and physical data model design. Development of user experience mock-up screens. Design of printout layouts. Design of entity, collaboration and user experience layer service contracts. Design of data schemas. 4 months
4. Implementation and unit testing of the solution 16 months

4.2 Support Division(s) / Section(s):	SGIM / IAP
4.3 End User Division(s) / Section(s):	SG / ALL
4.4 Estimated duration in months:	24

5. Safeguards Approval Process - not displayed

6. Acceptance by MSSP(s)

6.1 MSSP(s) to which the task is proposed:	Date accepted:	Agency Task ID:
USA		

Job Description for Professional Posts

Position and Grade:	Systems Analyst/Programmer (Containment & Seals P-3)
Organizational Unit:	Information Architecture and Projects Division of Information Management Department of Safeguards
Duty Station:	Vienna
Type/Duration of Appointment:	Cost Free Expert, ~~18~~ 24 Months (08/IAP-003)

Organizational Setting

The Department of Safeguards is the organizational hub for the implementation of IAEA safeguards. The IAEA implements nuclear verification activities for more than 160 States in accordance with their safeguards agreements. The safeguards activities are undertaken within a dynamic and technically challenging environment including advanced nuclear fuel cycle facilities and complemented by the political diversity of the countries. The Division of Information Management (SGIM) comprises four Sections and provides the Department of Safeguards with services relating to data processing, secure information distribution, information analysis and knowledge generation which are needed to draw independent, impartial and credible safeguards conclusions. The Information Architecture and Projects (IAP) Section provides project-oriented information and communication technology (ICT) services to all the Divisions and Sections in the Department, working cooperatively with staff in the Operations Divisions and the Support Divisions to plan, establish and maintain information systems and to provide them with system analysis, software development, software contract management and maintenance services. It implements best practices in project management using Capability Maturity Model (CMM) standards, and continuously monitors the Department's information-related needs so that they can be translated into requests for new or enhanced functionalities of ICT solutions.

This position is needed for one of the IAP units, the Verification Business Unit (VBU). The VBU provides ICT services in support of the core business of the Operations Divisions, which includes planning, preparation, performance and documentation of various verification activities such as visits, inspections and complementary access, carried out under comprehensive safeguards agreements or additional protocols.

Main Purpose

Under the general supervision of the SH-IAP, the Unit Head and Project Leader, if appropriate, carry out analysis, design, implementation, maintenance and documentation of a constantly evolving range of ICT solutions running on diverse platforms. In collaboration with the SGIM architects, to evaluate, propose hardware configurations as integral parts of the solutions. The software and hardware needs must meet the requirements for the successful implementation of Safeguards in various facilities.

Role

The Systems Analyst/Programmer is: (1) a specialist, designing, developing and maintaining the IAEA Safeguards Information System (ISIS) ensuring projects are developed and implemented in the most efficient and effective manner in line with quality management standards and the results based approach; (2) a point of liaison with Member States on software and hardware needs; (3) a team member of various projects, working collaboratively towards the final goals and reporting to the project leader.

Partnerships

The System Analyst / Programmer works closely with all users in the Department of Safeguards to fully understand their needs and, as a result, to provide them with ICT solutions for improving their efficiency.

Functions / Key Results Expected

- Work with users in defining and analysing user requirements for software and hardware applications.
- Work with Member State Support Programmes in defining and implementing the software and hardware requirements for the information systems to be provided.
- Design, develop and implement software, including the provision of training, and identification and implementation of hardware, together with associated documentation.
- Perform quality control and quality assurance of the software developed to ensure that it meets user requirements, is properly tested, adequately documented and conforms to established standards designed to promote reliability, accuracy, usability and maintainability.

Knowledge, Skills and Abilities

- In-depth knowledge of computer programming and of system analysis and design to develop efficient, robust solutions and to oversee the work of project staff.
- A deep understanding of and daily work experience in all aspects of systems engineering processes. Familiarity with system design and development in a Windows environment with object-oriented, component-based software development, and service oriented architecture principles. This includes the latest versions of Windows operating system, MS Office, SharePoint, ASP.NET, BizTalk, SQL Server, .NET Framework and Microsoft development tools.
- Familiarity with safeguards nuclear material accounting, verification activities, and State-supplied data analysis and management information needs is desirable.
- Strong analytical skills and customer orientation to translate customer requests into workable solutions.
- Strong interpersonal skills to work effectively as a member of multicultural / multidisciplinary teams, with respect and sensitivity for diversity.
- Good communication skills: Ability to write clearly and in a structured manner and to make effective oral presentationsd.

Education, Experience and Language Skills

- University (or equivalent) degree in computer science or a related field.
- At least 5 years of relevant practical experience including at least 3 years of recent experience with the development of client-server and web-based multi-tier applications.
- Experience with CASE tools and object-oriented software design and development.
- Knowledge of international safeguards is desirable.
- Fluency in English. Knowledge of another official IAEA language (i.e. Arabic, Chinese, French, Russian, Spanish) is an advantage.

Internal Human Resources use only:	
Effective Date:	
Occupational Group(s):	
Post Number:	